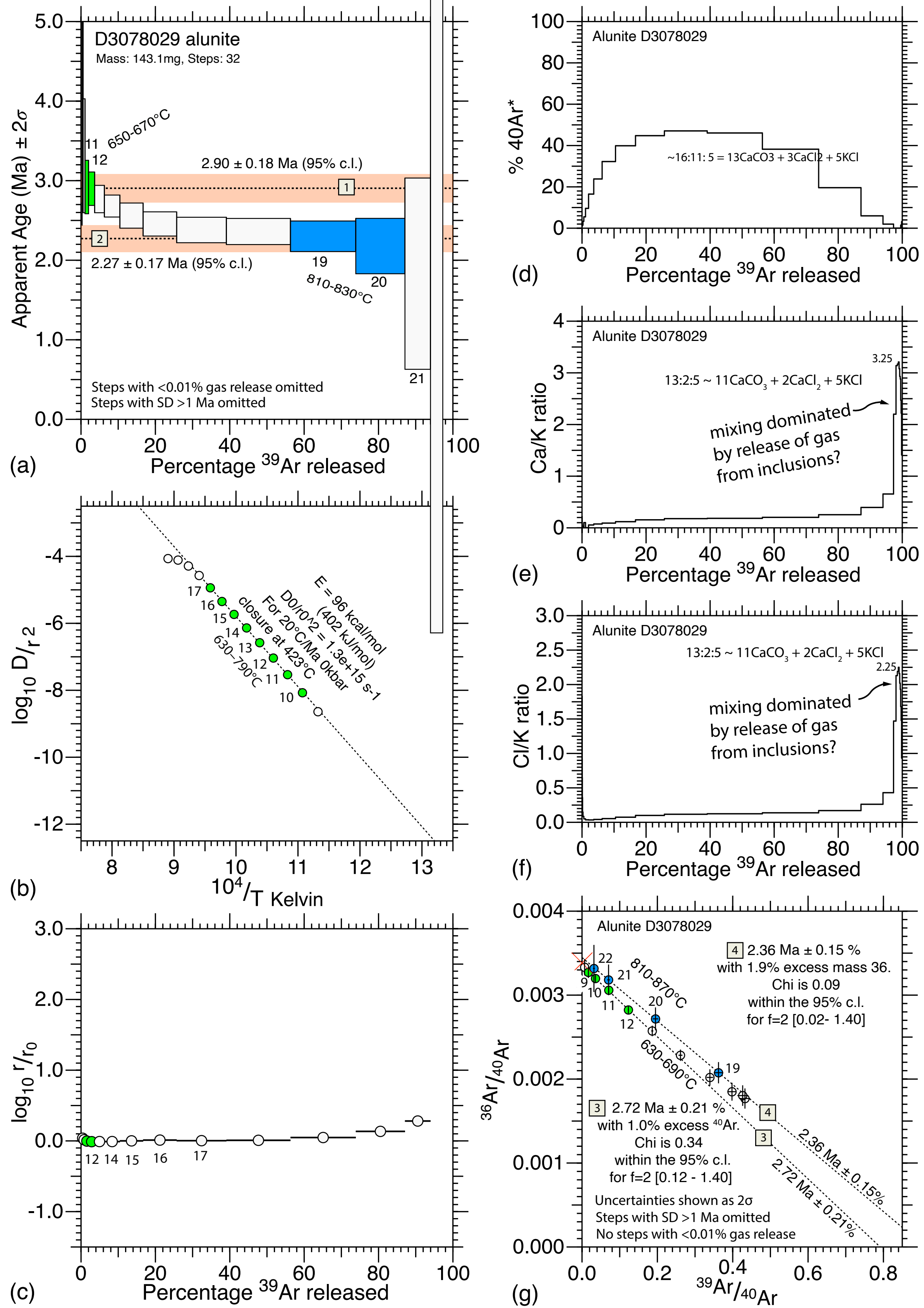
D3078029 alunite
Mass: 143.1mg, Steps: 32
Apparent Age (Ma) ± 2σ
650-670°C
2.90 ± 0.18 Ma (95% c.l.)
2.27 ± 0.17 Ma (95% c.l.)
810-830°C
Steps with <0.01% gas release omitted
Steps with SD >1 Ma omitted
Percentage 39Ar released
(a)
Alunite D3078029
% 40Ar*
~16:11: 5 = 13CaCO3 + 3CaCl2 + 5KCl
(d)
Ca/K ratio
13:2:5 ~ 11CaCO3 + 2CaCl2 + 5KCl
mixing dominated by release of gas from inclusions?
(e)
Cl/K ratio
(f)
log10 D/r2
E = 96 kcal/mol (402 kJ/mol)
D0/r0^2 = 1.3e+15 s-1
For 20°C/Ma 0kbar
closure at 423°C
630-790°C
10^4/T Kelvin
(b)
log10 r/r0
(c)
36Ar/40Ar
39Ar/40Ar
4 2.36 Ma ± 0.15 % with 1.9% excess mass 36. Chi is 0.09 within the 95% c.l. for f=2 [0.02- 1.40]
3 2.72 Ma ± 0.21 % with 1.0% excess 40Ar. Chi is 0.34 within the 95% c.l. for f=2 [0.12 - 1.40]
810-870°C
630-690°C
2.36 Ma ± 0.15%
2.72 Ma ± 0.21%
Uncertainties shown as 2σ
Steps with SD >1 Ma omitted
No steps with <0.01% gas release
(g)